

**Notice of Allowability**

Application No.

09/922,690

Examiner

Pedro J. Cuevas

Applicant(s)

OGINO ET AL.

Art Unit

2834

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on December 30, 2002.
2. ☒ The allowed claim(s) is/are 1 and 3-18.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☒ including changes required by the proposed drawing correction filed 30 December 2002, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____.            |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____.              | 6 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

## DETAILED ACTION

### *Drawings*

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on December 30, 2002 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

### *Allowable Subject Matter*

2. Claims 1 and 3-18 are allowed.
3. The following is an examiner's statement of reasons for allowance.

Mashino et al. clearly teaches the construction of an electric power supply system for automobile including:

a rotor having a plurality of magnetic poles and a field coil for polarizing said plurality of magnetic poles;

an armature having an armature core with a plurality of phase windings for generating AC voltage under the influence of rotating magnetic field provided by said rotor;

a pulse detecting means for detecting the number of frequency or pulses of said output signal of said comparator, wherein said field coil is energized to polarize said plurality of magnetic poles if the number of frequency or pulses of said input signal is the same as or larger than a predetermined level; and

a full-wave rectifier for converting said AC voltage into DC voltage, said voltage regulator comprising:

a phase voltage input terminal connected to one of said phase windings;  
a phase-voltage-detection circuit / sub-power circuit, connected to said phase voltage input terminal, for detecting phase voltage of said one of said phase windings and generating a rotation signal if it detects said phase voltage;  
a main power circuit, connected to said sub-power circuit, for supplying power;  
a field current switching element connected to said field coil; and  
a voltage control circuit, connected to said main power circuit, for monitoring the output voltage of said full-wave rectifier and generating a control signal that controls said field current switching element so that said output voltage of said full-wave rectifier can be controlled at a prescribed level.

The prior art of record, taken alone or in combination, fails to teach the construction of a voltage regulator for a vehicle AC generator as disclosed on independent claims 1, 9, 13, and 14, having:

first means for providing a variable threshold level representing a DC component of phase voltage of one of the phase windings;

a comparator for comparing the phase voltage of said one of said phase windings with the variable threshold level to provide a pulse signal that is proportional to a rotation speed of the rotor; and

second means for energizing the field coil when the number of pulses of the pulse signal becomes larger than a predetermined number.

Art Unit: 2834

Dependent claims 3-8, 10-12 and 15-18 are considered allowable by their respective dependence on allowed independent claims 1, 9, 13, and 14.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas  
March 21, 2003

*Thomas M. Ouyang*  
2/20/03